



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,226	08/30/2000	Arun K. Gupta	102157-100	2299

27267 7590 08/12/2003

WIGGIN & DANA LLP
ATTENTION: PATENT DOCKETING
ONE CENTURY TOWER, P.O. BOX 1832
NEW HAVEN, CT 06508-1832

EXAMINER

MIZRAHI, DIANE D

ART UNIT	PAPER NUMBER
----------	--------------

2175

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/651,226

Applicant(s)

GUPTA, ARUN K.

Examiner

DIANE D. MIZRAHI

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DIANE D. MIZRAHI
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/29/03 has been entered.

Response to Arguments

2. Applicant's arguments filed 7/29/03 have been fully considered but they are not persuasive.

Applicant argues that Sheffield, neither individually, nor in conjunction with Goldberg and Medl, teach the amended claim limitation of automatically generating executable code from the specified data elements, the generated code being for extracting the specified data elements.

Examiner respectfully disagrees. With regard to Applicant's assertion regarding data extraction and storage, Examiner maintains that an input and output method is semantically equivalent to executable code for extracting data elements in so

Art Unit: 2175

much as calling an output method results in the object extracting its data for use by an outside entity.

Regarding the use of the term "automatically," Examiner believes that this term is both vague and relative, as it does not define whether the code generation appears automatic to the user, the data, or to external objects. Applicant argues that Examiner's citation of Goldberg at Fig. 5A, step 504 and Col. 8, lines 36-39 is inappropriate as this citation shows that the source code generation is done by the programmer and not done automatically. Examiner respectfully disagrees. While the lines in question do state that the source code is generated by a user, the executable code (Java byte code) is generated automatically by the Java VM or compiler. Furthermore, any future claim amendment intending to claim that the source code is generated automatically will result in ambiguity, as even automatically generated source code, must be created by a program that was itself created from source code (written by a human).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2175

4. Claim 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheffield (U.S. 5,832,431) in view of Goldberg (U.S. 5,907,847) and further in view of Medl (U.S. 6,108,004).

Claim 1, 1st modification, Sheffield in view of Goldberg

As to Claim 1, Sheffield discloses a method for extracting desired data for metric analysis¹, the method comprising the steps of:

1) specifying desired data elements to be extracted from an operational database (see Col. 3, lines 12-15, and also see Fig. 21, where Sheffield teaches how a programmer may use an SQL statement or a GUI to specify one or more database tables and columns within those tables, thus selecting the desired data elements.);

2) executing the executable code thereby extracting the specified data elements from the operational database (see Col. 3, lines 21-23 where Sheffield teaches how the specified data elements may be selected and extracted and see Col. 4, lines 17-

¹ Note that the phrase "for metric analysis" is an intended use of the invention and does not constitute a structural feature. Thus the phrase is not given patentable weight. See MPEP 707.07(f)

Art Unit: 2175

22 where Sheffield teaches how code or "commands" are executed to retrieve the data from the operational database).²

Sheffield does not teach that executable code is automatically generated from the identified data elements. Rather, Sheffield discloses an interface object that resides between a client application and a database manager, which contains all the code ("methods" or "commands") necessary to perform such functions as data extraction.

Goldberg teaches that that executable code is automatically generated from the data elements and discloses a method in which an object's state and behavior may be coupled in a database management system. (See Fig. 5A, 504 and Col. 8 lines 36-39). Goldberg defines an object's state as being: "determined by the set of values an object carries for a set of properties or variables. A property can be an attribute of the object or a relation between the object and one or more other objects," and an object's behavior as being "defined by the set of operations that can be performed with the object. Each operation is

² Examiner uses Applicant's definition of an operational database as a database "typically designed to support all the business needs of an enterprise" (see instant application, p. 2, lines 28-30) in contrast to a staging database which is used only to store data extracted in the process of data mining from an operational database. (See instant application, p. 3, lines 9-12.) Examiner considers any database mentioned in the prior art as being an operational database, unless it is specified as being a staging database, as per Applicant's definition.

implemented in a routine that is referred to as a method. An object can include a plurality of methods. An operation is performed by invoking one of the object's methods." (See Goldberg, Col 1, lines 23-32)

Goldberg further teaches how an object's behavior may be stored with its state as methods (Fig. 3) and how these methods may be used to generate code for all relevant operations on the object's state (See Fig. 5A, 504 and Col. 8 lines 36-39).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the data extraction method of Sheffield to include the automatic generation of executable code from the identified data elements, the generated code being for extracting the identified data elements from the database.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the data extraction method of Sheffield to include the automatic generation of executable code from the identified data elements, the generated code being for extracting the identified data elements from the database for the following reasons:

a) so that the state and behavior of the object are stored reliably in the Database Management System (DBMS) in a single

Art Unit: 2175

location such that a modification can be made to both state and behavior in one transaction ;

b) so that when an object is extracted or replicated both its state and its behavior can be transferred securely and reliably; and

c) so that platform independent code can be generated from the object itself without additional modification when the object is extracted and stored in another environment (as taught by Goldberg at Col. 6, lines 6-13; Col. 7, lines 33-48).

Claim 1, 2nd modification, Sheffield as modified in view of Med1

Sheffield as modified does not teach that the executable code stores the extracted data elements in a staging database.

Med1 teaches data mining and storing data in a staging database. (See Col. 7, lines 33-48. Note that Applicant defines "staging database" as one used in data mining; Med1 discloses a database used in data mining. Therefore, staging database reads on: a database used in data mining as disclosed by Med1 at Col. 7, lines 3-48.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sheffield as modified wherein: the

Art Unit: 2175

executable code stores the extracted data elements in a staging database.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Sheffield as modified by the teaching of Medl because employing the use of a staging database to store data elements would allow the data elements to be used in data mining applications as data mining is a well known and useful technique for recognition of patterns such as profit, efficiency, and inventory.

As to Claim 2, Sheffield as modified teaches a method wherein the step of specifying includes identifying attributes (i.e. data type, data name, etc., Sheffield, Fig. 20, 214 & 216) and processes related to the desired data elements (Sheffield, Fig. 23).

As to Claim 3, Sheffield as modified discloses that the operational database is relational. (See Sheffield, Col. 2 line 60 - Col. 3 line 4; Goldberg, Col. 8, lines 28-29. Also see footnote to Claim 1 for discussion on operational and staging databases.)

As to Claim 4, Sheffield as modified discloses that the staging database is relational. (See Sheffield, Col. 2 line 60 - Col. 3 line 4; Goldberg, Col. 8, lines 28-29. Also see footnote to Claim 1 for discussion on operational and staging databases.)

As to Claim 5, Sheffield as modified discloses that identifying the data elements attributes and processes is performed utilizing a graphical user interface. (See Sheffield, Fig. 1, 20a; Fig 5; Fig 21)

As to Claim 6, Sheffield as modified teaches a method wherein the step of identifying includes deriving rules (e.g. data validation, Sheffield, Fig. 14) for extracting the desired data elements from graphical representations (i.e. GUI, Sheffield, Fig. 4) and manually defined values of attributes and processes (Sheffield, Fig. 21, 222; Fig. 23; Fig. 8, 22b) related to the desired data elements.

As to Claim 7, Sheffield as modified teaches a method wherein the step of executing includes invoking a background process for extracting and storing the specified data elements (i.e. batch processing, Sheffield, Col. 3, lines 44-51).

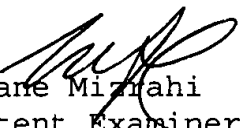
Art Unit: 2175

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diane Mizrahi whose telephone number is 703-305-3806. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


Diane Mizrahi
Patent Examiner
Technology Center 2100
August 9, 2003